Name: _____ Date: 3/3/20 Per: 8th

Dividing Polynomials Pre-Assessment

1. $(18x^4 - 10x^2 + 6x^7) \div (2x^2)$ $9x^2 \quad 5x \quad 3x^7$ $\dfrac{18x^4 - 10x^2 + 6x^7}{2x^2}$ $\boxed{9x^2 - 5x + 3x^7}$	2. $(x^2 + 7x + 12) \div (x + 3)$ $x^2 + 4x + 3x + 12$ $x(x+4) \quad 3(x+4)$ $\dfrac{(x+3)(x+4)}{(x+3)}$ $\boxed{(x+4)}$
3. $(3x^3 + 4x^2 - 3x + 7) \div (x + 2)$	4. $(9x^2 + 8) \div (3x + 2)$

Name: _____ Date: 3/6/20 _____ Per: 8 ___

Divide.

1. $(3p^3 - 27p^2) \div 3p^2$

$$\frac{3p^3}{3p^2} - \frac{27p^2}{3p^2} = \boxed{p - 9}$$

2. $(3c^2 - 5c - 2) \div (3c + 1)$

$$\begin{array}{r} c - 2 \\ 3c+1 \overline{)3c^2 - 5c - 2} \\ -(3c^2 + c) \downarrow \\ \hline -6c - 2 \\ -(-6c - 2) \\ \hline 0 \end{array}$$

$$\boxed{c - 2}$$
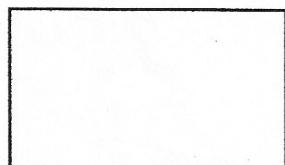
-1 **3.** $(x^3 + 3x^2 - 2x + 6) \div (x - 1)$

$$\begin{array}{r} x^2 + 4x + 2 \\ x-1 \overline{)x^3 + 3x^2 - 2x + 6} \\ -(x^3 - x^2) \downarrow \\ \hline 4x^2 - 2x \\ -(4x^2 - 4x) \\ \hline 2x + 6 \\ -(2x - 2) \\ \hline \boxed{4} 8 \end{array}$$

$$\boxed{x^2 + 4x + 2 + \frac{4}{x - 1}}$$

4. $(27y^3 + 64) \div (3y + 4)$

$$\begin{array}{r} 9y^2 - 12y + 16 \\ 3y+4 \overline{)27y^3 + 0y^2 + 0y + 64} \\ -(27y^3 + 36y^2) \downarrow \\ \hline -36y^2 + 0y \\ -(-36y^2 - 48y) \\ \hline 48y + 64 \\ -(48y + 64) \\ \hline 0 \end{array}$$

$$\boxed{9y^2 - 12y + 16}$$

5. The area of the rectangle is $x^4 - 9x^3 - 7x^2 - 8x + 2$. The length is given. What is the width?

$$\begin{array}{r} x^2 - 10x + 2 \\ x^2+x+1 \overline{)x^4 - 9x^3 - 7x^2 - 8x + 2} \\ -(x^4 + x^3 + 1x^2) \downarrow \\ \hline -10x^3 - 8x^2 - 8x \\ -(-10x^3 - 10x^2 - 10x) \\ \hline 2x^2 + 2x + 2 \\ -(2x^2 + 2x + 2) \\ \hline 0 \end{array}$$

$$\boxed{x^2 - 10x + 2}$$

$x^2 + x + 1$